

Chapter 6

Cancer Care

South Carolina Cancer
Prevention and Control

Chapter 6. Cancer Care

A driving force influencing the delivery of cancer care, whether privately funded or publicly assisted, is the economic burden realized by this chronic disease.

Economics of Cancer Care

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While estimates remain crude, actuaries projected that in 1995, the direct cost of cancer care exceeded \$57 billion, while indirect costs topped \$111 billion. With 1.2 million new cases and 4.5 million prevalent cases, this translates into an average direct cost of \$13,000 per year per case. With the graying of America, the growth in the population and the improvement in treatment options, it is anticipated that the overall rate of cancer is increasing annually by 4%. The incidence rate is increasing at a rate of 2% annually while prevalent disease is increasing at the rate of 3%, resulting in an increase in direct cost of \$164 billion and an indirect cost of \$250 billion by the year 2005.

Cancer is a disease of aging, with 61% of the incident cases occurring in the population over 65. Of the \$57 billion in direct cost spent, 51% or \$29 billion was spent on this group. By 2005, it is anticipated that this rate will reach 12,000 cases per 100,000 and direct costs will exceed \$85 billion.

In 1995, public funding accounted for \$31 billion of the direct costs of cancer care. The Medicaid population covered 31 million lives

and cost \$2 billion. The remaining \$29 billion covered 34 million Medicare lives and covered the bulk of all direct costs for cancer care in this group. Of the 34 million enrollees, only 3 million were treated in Medicare HMOs, accounting for \$3 billion in direct costs. This number is projected to increase as managed care becomes the standard.

South Carolina shares proportionately in the cost of care to its citizens. While cost per case data is unavailable, data from the South Carolina State Budget and Control Board on inpatient utilization reveal that inpatient care accounted for over \$484 million in total charges in 1995. Of the \$484 million billed, 5.6% or \$27.2 million was indigent care, 8% or \$38.5 million was Medicaid, 53% or \$257.7 million was Medicare, and 33% or \$160.6 million was private pay. Because these figures reflect only inpatient costs; the total cost of cancer is considerably higher. The National Center for Health Statistics (1990) estimates that inpatient costs for cancer account for only 65.3% of all medical expenditures.

It is anticipated that 19,500 new cases of cancer will be diagnosed in South Carolina this year. At a projected cost of \$13,000 cost per year, these cases generate a continuing annual direct cost of \$697,125,000 per year and an indirect cost of \$1,357,250,000 or \$390 per person in this state of 3.5 million people.

Lung Cancer

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At the beginning of this century, lung cancer was a rare disease. The present global epidemic is the direct result of governmentally sanctioned production and aggressive marketing of addictive tobacco products, primarily cigarettes. While an effective strategy for lung cancer treatment and control must include a broad spectrum of activities, the greatest long-term reduction in lung cancer mortality will come from a decrease in the number of people who smoke. This is especially true in South Carolina, which has limited resources to treat patients who develop lung cancer. And, because there is no cure for most lung cancer patients, it is imperative that the focus of the health care community be directed at prevention strategies.

An estimated 171,500 new cases of lung cancer will be diagnosed in the United States in 1998; 91,400 males and 80,100 females. The overall age adjusted incidence rate in men began to plateau in the late 1980's and has subsequently declined. Unfortunately the incidence continues to rise in women. Over the past several decades, the prevalence of cigarette smoking has increased significantly in women; concomitantly, changes in smoking practices have been accompanied by an increase in the relative and attributable risk of lung cancer. The risk of lung cancer in African-American men has also increased: over the past 10 to 15 years, lung cancer risk in African-American men has been approximately 50% higher than that in white men.

Prevention is the only way to decrease the incidence of lung cancer. The causal relationship

between cigarette smoking and lung cancer was established by epidemiologic studies in the 1950's and 1960's. The carcinogens in tobacco smoke include the polynuclear aromatic hydrocarbons (PAHs), N-nitrosamines, aromatic amines, and other organic and inorganic compounds.

Overall, smoking is estimated to cause 85% of lung cancer deaths. Unfortunately, despite the clear association between tobacco smoke and lung cancer, 50 million Americans continue to smoke. The risk of dying from lung cancer is associated with the duration of smoking and with the number and type of cigarettes smoked each day. The health benefits of smoking cessation begin immediately after a smoker stops and the risk of developing lung cancer markedly decreases over the next eight years.

Exposure to environmental and occupational respiratory carcinogens may interact with smoking to increase the risk of cancer. Occupational risk factors include exposure to asbestos fibers, radon, arsenic, vinyl chloride, nickel and chromium.

In South Carolina about 25% of the population are smokers. Their family members and co-workers are also at increased risk for developing lung cancer from side smoke. A non-smoking member of a smoker's household has 1.2 to 1.5 times the risk of developing lung cancer as an unexposed nonsmoker. Approximately 3,000 deaths per year are attributable to exposure to side smoke in this country.

Survival from lung cancer is dependent upon cell type and stage of disease at presentation. Currently the overall five-year survival rate for patients with lung cancer is less than 15%, which is most likely due to the advanced stage of cancer at presentation.

Early Detection

There is no viable screening test for lung cancer. We can, however, identify high risk individuals and groups by using demographic factors such as age, smoking history, the presence of chronic obstructive lung disease such as COPD and occupational history (exposure to asbestos, uranium, and chloroethyl ether). These factors may eventually be used to target high-risk individuals who could benefit from early intervention.

Chemoprevention may also hold promise, because lung cancer is a multi-step process characterized by premalignant changes such as bronchial metaplasia and dysplasia in heavy smokers. Patients who survive two years after diagnosis of lung cancer have a risk of developing second smoking-related primary tumors at a rate of 2% to 14% per year. The actuarial cumulative risk 15 years from the start of treatment is 70%. Currently, the National Cancer Institute (NCI) is accruing Stage I non-small cell lung cancer patients for a chemopreventive trial using 13-cis-retinoic acid versus a placebo. A similar trial is planned for small cell lung cancer.

Treatment

The treatment of lung cancer depends upon the cell type and stage of disease at presentation. Because the majority of patients present with unresectable or metastatic disease, curative resection is only possible in a minority of patients: those with non-small cell lung cancer (NSCLC) who present with an early stage. Controversy exists regarding the best modality of treatment for unresectable disease. The role of neoadjuvant therapy (chemotherapy and radiation) given prior to surgery is currently under active investigation in clinical trials and whenever possible, patients should be enrolled in these trials.

Similarly, the benefits of chemotherapy are not clearly established in patients with Stage IV or metastatic non-small cell lung cancer. Overall survival has been increased only modestly through chemotherapy. Patient preferences should be included in treatment decisions and the small survival benefit from chemotherapy must be weighed against the toxicity of the treatment.

Small-cell lung cancer is not a surgical disease; chemotherapy and radiotherapy are the primary modalities of treatment. For this patient group, treatment options have traditionally included radiotherapy and chemotherapy, alone or in combination, depending on the extent of disease.

Comprehensive care of lung cancer requires expertise from various specialists. The effectiveness of a multi-disciplinary tumor board, which generally includes a medical oncologist, thoracic surgeon, pulmonologist, radiologist and radiation oncologist, should not be underestimated. A comprehensive approach to complicated lung cancer cases can lead to treatment plans tailored to a specific patient's needs.

Breast Cancer

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Malignant disease of the female breast continues to be a major health problem in all westernized countries. Although mammographic screening, self-examination, and other methods of early detection have increased the likelihood of finding breast cancer at an earlier stage, it is estimated that in 1998 over 180,000 women will develop breast cancer and that 43,500 women will die of this disease.

Although many risk factors have been identified for breast cancer, it is difficult to outline a program of primary prevention for this malignancy at this time. Diets low in fiber and high in fat may contribute to overall rates of breast cancer, but this remains controversial. The overall effect of hormone ingestion is equally controversial, although certainly women at higher genetic risk for breast cancer may be more susceptible to malignancy stimulated by estrogen.

Alcohol may also be a factor; as in other malignancies, it has been shown that women who consume higher levels of alcohol per day may be at greater risk for breast cancer. South Carolina should continue to monitor these primary risk factors, especially for women at higher risk for the disease.

Early Detection

The single most effective way to reduce the number of breast cancer deaths in South Carolina is to ensure that women enter screening programs which include mammography and breast self-examination. At this time, early detection is the only credible method to reduce breast cancer mortality and should be the focus of our resources and educational endeavors in South Carolina. Since 1990, there has been a small but steady increase in the number of women undergoing screening for both breast and cervical cancer in this state. Barriers to screening exist, however, especially among women who are economically disadvantaged, have less education, and live in rural areas.

Genetic Markers

Along with conventional screening, the advent of new techniques in genetic testing and molecular biology will hopefully identify women who are at a greater risk of breast cancer because of familial association.

Genetic research on the mutation of the BRCA1 gene has led to techniques which can identify women who are genetically predisposed to breast cancer. Advanced genetic testing gives us a screening tool which can be used before cancer has even had a chance to develop. For women who carry this genetic marker, clinicians can recommend surveillance and possibly aggressive surgery. This new technology has the potential to save women's lives.

At the same time, these advances open an ethical frontier for clinicians, public health professionals and legislators. Without clear legislative protection, women could potentially become uninsurable if their medical records carry markers for the genetic predisposition of breast cancer. These issues, which are unprecedented, must be dealt with legislatively to ensure that women are protected as new molecular biologic techniques are introduced.

Treatment

The use of mammography has created the ability to identify breast cancer at early stages when the disease is amenable to lumpectomy, a breast-sparing surgery. The percentage of women undergoing lumpectomy in South Carolina, however, continues to be slightly below that of women in northeastern and far western states. These differences may be related to socioeconomic factors such as the availability of post-operative radiation and other non-surgical treatment. In any case, they are significant, because the less invasive the treatment, the more likely women are to seek help.

The liberal use of adjuvant chemotherapy for women in South Carolina generally equals that seen in other areas of the country. Many regional hospitals are now able to treat patients with radiation therapy and chemotherapy, which, for many patients, reduces the significant obstacle of traveling to distant cancer centers.

In addition, the use of either immediate or delayed reconstruction following mastectomy is increasing. This is an important psychological factor in encouraging women to seek medical assistance once breast tumors are identified. General surgeons must continue to work closely with their plastic surgical colleagues to make reconstruction available for all patients. Proponents for women's health must support legislative policy which ensures that all South Carolina women have the opportunity for modern reconstructive procedures.

The hope for reduction in cancer deaths depends on our ability to create new knowledge through basic and clinical science, and clinical trials are central to that research. Academic medical institutions throughout South Carolina direct research in the epidemiology and overall management of breast cancer. Unfortunately, the current percentage of women entering clinical trials is low and can only be increased through educating both patients and physicians. It is hoped that this process will not be legislated but will become important to all physicians treating breast cancer even in the age of managed care.

Colorectal Cancer

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Overview

During 1998, it is estimated that approximately 131,000 Americans will be diagnosed with carcinoma of the large intestine, including the rectum. Death from carcinoma of the colon and rectum will total approximately 56,500 in 1998 in the United States. In South Carolina, an estimated 2000 people will be diagnosed with colorectal cancer and there will be an estimated 900 deaths.

Early Detection

It is unlikely that primary prevention through dietary education or the identification of other risk factors will significantly reduce the incidence rates of colorectal cancer during the next several decades. The thrust of planning for this disease must center on detection since early recognition of colon and rectal cancer will allow for the possibility of curative treatment. The most appropriate management scheme at this time is to recommend that the American Cancer Society (ACS) guidelines for colorectal screening be adhered to and that digital rectal examination, stool blood tests, and

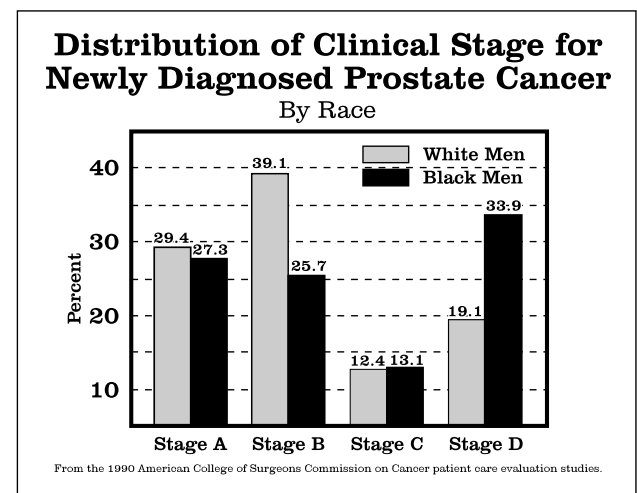


figure 6.1

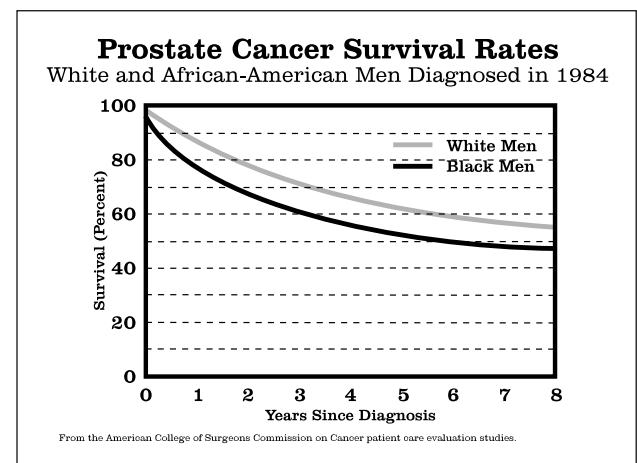


figure 6.2

sigmoidoscopy be initiated at appropriate ages in the general population. ACS recommends that the digital rectal examination be performed annually after the age of 40 and that the stool blood test be done annually after the age of 50. Sigmoidoscopy should be performed at the age of 50 and repeated every three to five years in the asymptomatic population.

Genetic Screening

The greatest number of colon cancer patients have sporadic colorectal cancer (94%). However, a high risk group, with a genetic predisposition for Non-Polyposis Colon Cancer, has recently been identified. This means that earlier screening and genetic testing may identify patients who are at significant risk for cancer but do not have the polyps usually associated with this disease. Commercial genetic tests are being developed but have not yet been released for universal population screening. Patients identified as having Hereditary Non-Polyposis Colon Cancer (HNPCC) make up only approximately 5% of total colon cancer patients. Another small percentage (1%) may be identified as having Familial Adenomatous Polyposis.

Early detection can identify patients who have small tumors with minimal penetration in the wall of the colon and rectum. Surgical excision in these patients will hopefully remove tumors which are small and have not yet affected regional lymph nodes. Early diagnosis and screening will hopefully reduce the overall mortality from colorectal cancer in South Carolina by the year 2002.

Prostate Cancer

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Prostate cancer is the most commonly diagnosed cancer among American men after skin cancer and the second leading cause of cancer death in men after lung cancer. More men die of prostate cancer in South Carolina than in any other state in the union.

The greatest promise for saving lives from prostate cancer is early detection through a simple blood test called Prostate Specific Antigen (PSA). The American Cancer Society recommends that both the PSA test and the digital rectal examination (DRE) be offered annually, beginning at age 50, to men who have a life expectancy of at least 10 years and to younger men who are at high risk. The Detection Chapter of this report discusses this issue in more detail.

It is not clear at this time whether prostate cancer screening discovers cancer at an earlier stage in all populations. National data from the American College of Surgeon's Commission on Cancer (1974 vs. 1990) shows that some improvements have been made in prostate cancer diagnosis – at least for white men. (Figure 6.1.) In this group, the number of early stage diagnoses increased, and the number of late stage diagnoses declined (ACS, 1994; Chodak, 1995; Osterling, 1996).

Corresponding data for African-American men, however, is considerably different. Nationally, early stage diagnoses actually decreased and late

stage diagnoses increased in the African-American population. African-American men are less often diagnosed with curable, Stage B cancer compared with Caucasian men by a large margin: 25.7% to 39.11%. And African-American men are much more likely to be diagnosed with metastatic, clinical Stage D or end-stage prostate cancer by a margin of 33.9% to 19.11%. This may be due to the fact that African-American men have higher pretreatment PSA values than whites and tumors in African-American men may be more advanced and more aggressive (Urology Times, July, 1995). (Figure 6.2)

South Carolina data from Charleston and Columbia cancer centers indicates that prostate cancer is being diagnosed in the early stages (Stage I and II) at a frequency rate of about 80% (RMH, 1994; BMC, 1995; RCC, 1994). This is a significant improvement from 1980 statistics, which indicated that the majority of men were diagnosed with prostate cancer at Stages III and IV (Stage C and D). A significant majority of these new cases are from the Caucasian population, which is unsettling because we know that African Americans have a statistically higher incidence of prostate cancer. (Data is from 1994 statistical reports submitted to the National Cancer Data Base.)

Treatment Methods

Most men with prostate cancer, especially in early stages A, B, and C often have no symptoms. When symptoms occur, they can include painful or frequent urination or blood in the urine, lower back pain, pelvic pain or upper thigh discomfort. Patients are given a PSA test and/or digital rectal exam to determine whether a tumor is present. PSA tests are generally agreed to be significantly abnormal when greater than 4.0 nanogram per ml. (Ng/Ma). However, abnormal elevation of PSA can also be associated with Benign Prostatic Hyperplasia (BPH).

There are several important steps that need to be undertaken if a Digital Rectal Examination (DRE) and/or PSA test are abnormal. Transrectal ultrasound of the prostate (TRUS) and a biopsy are completed. When the ultrasound or biopsy are negative, the patient should have follow-up surveillance at intervals specified by his physician.

When the tests are positive, a brief evaluation for staging should be done before treatment is rendered. Current guidelines for the metastatic evaluation include a whole body bone scan (nuclear medicine study) and thorough pathological evaluation of the biopsy specimens to determine the Gleason Score.

The clinician combines the patient's age, biopsy results, (including Gleason Score), PSA, bone scan and general health evaluation to determine the clinical stage (A,B,C or D). Based on these factors, treatment recommendations can be explained to the patient. If prostate cancer is diagnosed, there are several options: 1) no intervention or surveillance; 2) hormone manipulation and/or drug therapy; 3) radical prostatectomy; 4) radiation therapy. The patient and his physician should thoroughly discuss these options before deciding which is best to pursue. The choice of treatment depends on the stage of the disease, along with the patient's age and general state of health.

Option 1: Surveillance (Observation), No Intervention

"Watchful waiting" is the term that is presently used for treating prostate cancer if the cancer is confined to one site in the prostate gland, causing little or no physical discomfort, and the life expectancy without treatment is greater than 10 years. Since prostate cancer is frequently a slow growing cancer, a clinician can simply monitor these patients with periodic examinations, instead of immediately using an aggressive treatment modality. In general, this approach is more often used in elderly men. For

example, a man over the age of seventy who is in otherwise good health with a life expectancy of 10 years, may be a suitable candidate for watchful waiting. Statistical analysis has shown that he may die of other causes before the prostate cancer can cause serious harm.

Option 2: Hormone manipulation and/or drug therapy

Testosterone is necessary for normal prostate tissue to grow and many cases of early prostate cancer involve androgen stimulation. Prostate cancer depends on the presence of male hormones for its growth and development. By the use of hormone manipulation or drug therapy, the growth is eliminated. Hormone manipulation can be accomplished by surgically removing the testicles (orchiectomy), commonly known as castration. Newer regimens, including drug therapy with Lh-Rh agamous therapy can be delivered through a monthly injection. And newer forms of this particular medication can now be given every three months. When combined with an anti-androgen tablet, these therapies can provide total androgen blockade. There is some concern that hormonal therapy may only last for a few years. Many prostate cancers eventually become hormone resistant, possibly due to a mutation in the androgen receptor gene. New methods of treatment for androgen-resistant prostate cancer may lie in the field of genetic manipulation, which is currently being researched.

Option 3: Radical Prostatectomy

If the prostate cancer is confined to the gland only and has not penetrated the capsule, then surgical removal of the prostate can be an effective treatment regimen. This operation has fortunately been significantly modified since 1982. Currently, radical prostatectomy is considered the gold standard of therapy and all other treatments are measured against its results. Surgical improvements over the past few years have reduced the significant side effects of postoperative urinary incontinence and

impotence (Walsh, 1993; Oesterling, 1994; Darrett, 1994).

Option 4: Radiation Therapy

Early stages of prostate cancer can be effectively treated with radiation therapy. For a patient in the early stage of disease with a low Gleason Score (Stage A or Stage B), radiation therapy can offer results that approach the success of radical prostatectomy.

Currently there are two ways to deliver radiation therapy to prostate cancer patients. The most common is external beam radiation therapy. Men who have developed later stages of the disease (metastatic or Stage D) are frequently treated with external beam radiotherapy, which uses three-dimensional views to target tumor sites. This process can alleviate the pain associated with bony metastases and frequently prevent bone fractures that may result from the invasion of the metastatic prostate cancer deposits into the skeletal bones. The newest type of delivery, which actually has been used since the 1970's in an open surgical technique, and since the late 1980's in an outpatient setting, is percutaneous delivery of radioactive seeds (Ragde, 1995).

Option 5: Cryosurgical Ablation of the Prostate

This is considered an investigational form of therapy and its use is currently controversial. It was initially used in the mid-1960's at the University of Iowa, but was abandoned by the mid-1970's. This form of treatment started to regain popularity again in the late 1980's because of the development of ultrasound, which allowed physicians to limit the freezing to the prostate alone.

Over the past five years, short term results of this therapy have shown promise, with approximately 85% of patients treated having normal PSA levels and negative biopsies. Long term results are currently not available. Within

the next year, we should have five-year results indicating whether or not this is an appropriate therapy for prostate cancer. However, in men who have had radiation treatment and who are now exhibiting biochemical failure (rising PSA) or persistent cancer after two years of radiation therapy, cryosurgical ablation may be the only alternative to hormone ablation.

Men in South Carolina fortunately have all of these options for treatment available within our state.

Getting the Message Out

At this time, we cannot hope to contain prostate cancer through preventive measures. We do, however, have powerful new tools which can identify this cancer in its early stages and save lives. Our dilemma is to find the most effective way to educate the public at large of the importance of early diagnosis for prostate cancer. For groups addressing the problem of prostate cancer in South Carolina, please refer to the Resources Chapter of this report.

Skin Cancer

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Overview

Malignant melanoma incidence is increasing faster than any other malignancy in the United States (Figure 6.3, after Ries, et al. 1990). Each year there are an additional 4-5% new cases of melanoma diagnosed. For the year 1998, it is estimated that there will be a total of 41,600 new cases of

melanoma with 7,300 deaths attributable to this disease. In South Carolina, there will be approximately 500 new cases of melanoma (ACS, 1998). In the United States, melanoma of the skin ranks as the eighth most common cancer among Caucasians and it is the most common cancer in whites between the ages of 25 to 29.

Mortality rates for malignant melanoma for individuals in South Carolina from 1973-1992 show that we rank in the third quartile of all states (CDC, 1995). That means that more than 50% of the states have a higher risk of dying from melanoma than South Carolina. However, it is important to keep in mind that our state has a large black population. If we calculate the risk for developing melanoma in only the Caucasian population, we then move up to being in a group of states ranking 7th on the list of states with the highest mortality from melanoma. Even more worrisome is the fact that when we

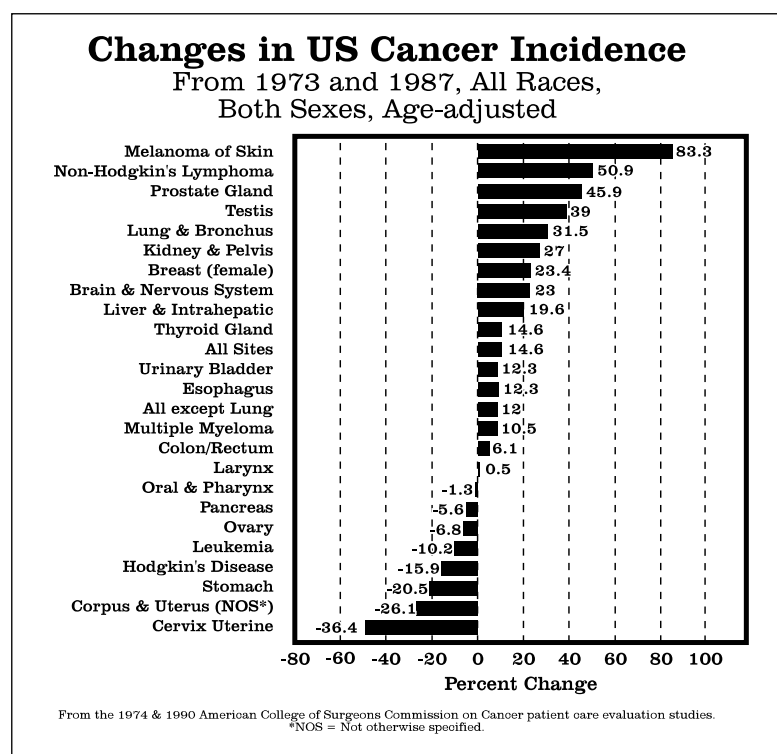


figure 6.3

consider only Caucasian males, South Carolina ranks with a group of states with the third highest mortality rate from melanoma.

Survival

The five-year survival rate for patients with melanoma is 87% (ACS, 1996). Between 3 to 5% of patients with melanoma will develop a second primary melanoma in their lifetime. Patients with the atypical mole syndrome referred to as the dysplastic nevus syndrome or the Familial Atypical Multiple Mole-Melanoma syndrome (FAMMM) have a much higher risk. Thus the prevention of a second melanoma is of great importance in this population. These patients should be entered into follow-up programs where they are evaluated at least every six months. Sun avoidance and the use of sunscreen is of the utmost importance in these individuals.

Treatment

The primary treatment for a newly diagnosed melanoma is complete surgical removal. The diagnosis and treatment of a lesion suspected of being a melanoma is generally accomplished in a two-step procedure. The initial step is to biopsy the lesion to confirm the diagnosis. This material is sent to the pathologist to confirm diagnosis and determine the depth of invasion. The depth of invasion is then used to determine how much normal tissue is to be included in the wide re-excision, Step 2 of the initial therapy.

Following the initial diagnosis, the stage of prognosis is determined using the TNM system developed by the American Joint Committee on Cancer (AJCC). Whether or not the patient will require extensive staging studies to determine the presence of metastases will depend upon the risk of the primary and the clinical status of the patient. Patients with low risk melanomas

generally should not undergo extensive radiologic testing as the likelihood of a positive study is minimal and the expense is significant. Patients who develop metastatic disease generally are offered either chemotherapy or treatment with one of a variety of biological agents. Several recently identified regimens seem to produce a modest improvement in response rates when compared with single treatment, which is currently accepted as standard therapy.

Therapy in South Carolina

In January of 1994 the first melanoma research program in South Carolina was established at the Hollings Cancer Center at the Medical University of South Carolina in Charleston. This program has provided patients with all stages of melanoma with new cutting edge treatment options that were previously unavailable. Currently available programs include screening for high risk individuals and their families, new surgical approaches, and clinical trials which evaluate new prevention options for patients who have had melanoma and are at high risk.

New surgical advances including the use of the sentinel lymph node biopsy have added options for patients who may be at risk of disease that has spread into their lymph nodes. This approach provides the same information that previously required more extensive surgery that frequently resulted in chronic painful swelling of either arms or legs.

Preventive programs include the use of a vaccine that is made from the patient's own tumor and injected into the patient's skin on a monthly basis. Preliminary studies have demonstrated that this vaccine is extremely effective at preventing recurrent disease in patients who have suffered one recurrence and were able to have this disease removed at surgery. This vaccine is available at only one other institution in the US.

New chemotherapeutic advances have also been developed at the Hollings Cancer Center which have resulted in the first advancement in the treatment of patients with metastatic disease in more than 20 years. This program is used in both the preventive situation as well as for patients with established metastatic tumors. Response rates have risen from 20% to more than 50%.

Community physicians have contributed significantly to the success of the melanoma research program. Their active participation has brought these therapeutic options to more patients and frequently means that the patients can be treated closer to home, making the treatment more tolerable.

Programs for the Future

Despite our best efforts people will continue to develop this disease and ultimately die as a result of overwhelming tumor burdens. Support for basic science continues to be undercut each year. Money to support new research has become more and more difficult to find, forcing many scientists to limit their studies. We must continue to support current research efforts and develop new funding opportunities.

It is generally not recognized that our ability to conduct clinical trials has been severely curtailed. Clinical trials are our only means to develop new treatments, however, as government funding has decreased so has our ability to support these studies. In fact, many young physicians are opting to leave academic medicine for private practice as a result of the inability to obtain funding to conduct clinical trials. Additionally, in today's health care insurance environment, insurance companies continue to refuse to pay for patients entered into these studies. Pressure must be brought to bear on these companies at the government level, however we as consumers and as patients must also continue to insist that insurers support these endeavors.

Cancer Pain

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Research over the last fifteen years paints a dismal picture of how cancer pain is treated but a hopeful picture of how it can be successfully controlled in most cases. More than eight million people in the United States have cancer or a history of cancer, and an estimated 50 to 70% experience pain at some point in their disease. In addition, 25% of all cancer patients die with severe unrelieved pain (Dout and Cleeland), and 75% of cancer patients with advanced disease have pain (Foley). The hopeful picture would tell the same story that the research indicates — that 90-95% of patients can have their cancer pain controlled by relatively simple, currently available means and that 85-90% of all cancer pain can be effectively managed with oral analgesics (Goissis et al.). If, in fact, current methods are available to ensure adequate pain relief for the majority of cancer patients, why is cancer pain undertreated? Several factors account for this disparity which can be summarized into three broad categories:

- Health care professionals are lacking in their ability to adequately assess cancer pain and the training to manage that pain.
- Health care professionals and the public have unwarranted concerns about addiction.
- Regulatory issues may interfere with effective pain management.

Pain control deserves a high priority for several reasons. Unrelieved pain causes needless suffering. Patients living in pain may have significantly more emotional problems, may

respond poorly to treatment, and may even die sooner than patients whose pain is effectively treated. Pain also restricts physical activity, disrupts appetite and sleep and diminishes that patient's overall quality of life. Cancer pain prevention and relief should be an expectation of all persons with cancer and thus a top priority in the routine care of these patients.

Pharmacological approaches remain the cornerstone of effective pain management, but medication is not the only answer. Many non-pharmacological approaches such as relaxation techniques, massage, biofeedback, transcutaneous electrical nerve stimulation, hypnosis, and support groups are effective as adjunctive therapies. The key is finding what works for each individual patient and family unit.

Goals of the South Carolina Cancer Pain Initiative

When South Carolina became the 29th state to establish a state cancer pain initiative, its members recognized the need to establish a multidisciplinary organization committed to promoting optimal cancer pain management throughout the continuum of care. Hence, its “.. mission is one of education and advocacy; our fundamental purpose is to make pain prevention and relief a top cancer care priority and an expectation of all persons with cancer.” To accomplish its mission, the South Carolina Cancer Pain Initiative (SCCPI) established five broad goals:

- To enhance the knowledge, skills, and attitudes of health care professionals.
- To provide accurate information and promote positive attitudes about cancer pain relief among patients, families, significant others, and the public.

- To identify and eliminate barriers to optimal cancer pain management through interactions with legislators, regulatory agencies, organizations, institutions, and individuals involved with cancer care.
- To conduct, disseminate, and use research to ensure state-of-the-art cancer pain management.
- To create a statewide network of multidisciplinary cancer pain treatment resources to promote professional and public education.

Barriers to Pain Management

Barriers to proper cancer pain management include problems related to health care professionals, problems related to patients, and problems related to the health care system.

Professionals are still concerned about regulatory guidelines of controlled substances; professionals and the public alike are still concerned about patient addiction, side effects of analgesics, and patients becoming tolerant to analgesics. It is important that health care professionals themselves discern the difference between physical addiction and physical dependence. Cancer patients do not take drugs for a “high”; cancer patients take analgesics to make their pain tolerable so that they may go about their normal activities of living. Professionals who care for patients with cancer pain should study and practice the Agency for Health Care Policy and Research (AHCPR) Guidelines for Cancer Pain Management.

Knowledge of effective cancer pain management strategies will enable them to dispel the myths associated with pain medications and to educate patients, families, and the public. Additional emphasis must be placed on appropriate pain management for cancer patients in medical, nursing, and allied health care school curricula.

Financial and Other Considerations

Other problems include inadequate reimbursement and access to treatment. Determining the overall cost of cancer pain management is difficult to ascertain as the cost is not separated from other treatment costs but rather included as part of the inpatient or outpatient visit. Access to professional services, prescription drugs, and even medical equipment is necessary for effective pain management. Reimbursement or lack of it influences the way pain is treated, where it is treated, as well as the supportive services available. More than 74% of the state's physicians practice in urban areas located in 15 of the state's 46 counties.

Reimbursement policies of third party payers for pain management differ. Outpatient oral analgesics reimbursement remains nonexistent to slim at best, while more expensive, more invasive inpatient treatments are covered at a significantly higher reimbursement rate. Over 300,000 South Carolinians are on Medicaid and are limited to three prescriptions a month. If they are on multiple prescriptions, they are seemingly faced with the dilemma of which medication regime(s) they should follow.

A patient's economic status may influence how they are treated. Collaboration with patients and their families is essential when considering the cost of drugs and technologies in search of the most effective pain management strategy for each individual. African-Americans are known to be at increased risk for undertreatment of cancer pain.

These factors have served to guide the initiative's focus. For example, because a large portion of the state's population lives in rural areas and is considered to be medically indigent, educational projects must focus on reaching out to rural health care providers and others who serve these populations. The fact that South Carolina

is a small state makes networking possibilities among cancer professionals easier, enhancing the possibility of disseminating information to providers across the state.

Objectives for Change

Although the SCCPI has certainly accomplished much since its inception in 1992, the multidisciplinary organization is still far from achieving the mission of making cancer pain prevention and relief a top priority and an expectation of all people with cancer. A current challenge of the SCCPI is to maintain the high level of individual commitment evidenced by members thus far, while recruiting new members to become actively involved with the initiative.

Perhaps the mission could best be achieved through the development of satellite regional groups within the state (e.g., Lowcountry, Midlands, Upstate), which would be responsible for expanding the knowledge base of their own constituents. In addition, since so many cancer patients are cared for by primary care physicians, the SCCPI would like to make certain that these providers have an active role in and access to the SCCPI and accurate cancer pain management publications; this could be accomplished through membership in the initiative and associated educational forums.

Finally, while none of us in cancer care believes needless suffering by patients with cancer has been eliminated, it is important to understand that it can be. The importance of the issue of cancer pain management to South Carolinians demands that our current and future challenges be met so that receiving appropriate pain management becomes the common expectation of all people with cancer.

To find out how you can become actively involved with the SCCPI or for additional information, please contact the South Carolina Cancer Pain Initiative at (803) 739-6628.

Psychosocial Oncology

Sue Heiney, MN, RN, CS, Manager, Psychosocial Oncology, Center for Cancer Treatment and Research, Palmetto Richland Memorial Hospital

The psychosocial care of patients with cancer has been shown to have a profound impact on a cancer patient's quality of life (Speigel, et al., 1989). Psychosocial care increases the length of time that patients are able to be productive members of society and saves money for the healthcare system; a poorly adjusted patient could cost the healthcare system 75% more than a well-adjusted one (Heiney, 1995).

Because cancer affects the entire family, and because three out of every four American families can expect to be touched by cancer, this aspect of health care can have an impact on almost all of our lives.

In South Carolina, hospitals, the American Cancer Society and other organizations offer peer support groups for cancer patients, including programs at Richland Memorial Hospital, Lexington Medical Center, Baptist Medical Center, Hollings Cancer Center (Charleston), Anderson Area Medical Center, and Self Memorial Hospital (Greenwood). A particular challenge of psychosocial oncology in a rural state like South Carolina is to provide support to patients in rural areas and small towns.

Goals of a Successful Psychosocial Care Program

The purpose of psychosocial care is to:

- Reduce morbidity and suffering while enhancing recovery and healing for people with cancer, their family and the community.

- Educate the patient, family, staff and community about coping with all phases of the cancer experience.
- Support the patient, family, staff, volunteers and community through all phases of the cancer experience.
- Provide for rehabilitation of the cancer patient.
- Promote research to document the effectiveness of psychosocial interventions and encourage patient participation in clinical trials.

Health Care Trends

The constraints of dwindling resources, and the increasing number of patients with cancer could force cancer centers to decrease psychosocial services and programs (Heiney, 1995). The challenge to medical and public health professionals is to find innovative and effective ways to continue to provide support to cancer patients including advocating for and locating funding for such care.



Hospice Programs

Tambra Medley, MSPH, Executive Director, South Carolina Hospice for the Carolinas

Hospice offers palliative care to persons with a limited life expectancy and their families, regardless of diagnosis, age, gender, nationality, race, creed, sexual orientation, disability, or ability to pay. Patients appropriate for hospice care should meet the following criteria:

- Have a limited life expectancy with the anticipated prognosis determined by the physician to be six months or less.
- Have a designated attending physician who is willing to work with the hospice team.
- Be seeking palliative, comfort care rather than curative treatment.
- Have a responsible caregiver or agree to develop an alternate plan of care consistent

with the patient's safety and needs and in compliance with Hospice standards of care.

Hospice recognizes the patient and the patient's family as the unit of care. An interdisciplinary team of health professionals and volunteers provide medical, emotional, social and spiritual services. This team includes physicians, nurses, social workers, home health aides, chaplains, volunteers and other health professionals needed for the individual care of a patient. Bereavement staff is available to help the family cope with the patient's death.

Hospice services are covered by a variety of reimbursement systems including Medicare, Medicaid, Blue Cross and Blue Shield of South Carolina, and many other private insurance carriers. Patients may also pay privately. Hospice care is provided to patients without regard to their ability to pay.

There are 32 hospices serving 46 counties in South Carolina.